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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

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Applicant's or agent's file reference 80.8160	FOR FURTHER ACTION		See item 4 below
International application No. PCT/DE2005/000272	International filing date (day/month/year) 17 February 2005 (17.02.2005)	Priority date (day/month/year) 19 February 2004 (19.02.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant EMIL MÜLLER GMBH			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input checked="" type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

Date of issuance of this report 04 October 2006 (04.10.2006)	
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Agnes Wittmann-Regis e-mail: pt06@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43b/a.1)

Date of mailing (day/month/year)		See form PCT/ISA/210
Applicant's or agent's file reference 80.8160		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/DE2005/000272	International filing date (day/month/year) 17.02.2005	Priority date (day/month/year) 19.02.2004
International Patent Classification (IPC) or both national classification and IPC B22C9/10		
Applicant EMIL MÜLLER GMBH		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/DE2005/000272

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Form PCT/ISA/237 (Box No. 1) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/DE2005/000272

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims 1-3		YES
	Claims		NO
Inventive step (IS)	Claims 1-3		YES
	Claims		NO
Industrial applicability (IA)	Claims 1-3		YES
	Claims		NO
2. Citations and explanations:			
1.)			
Reference is made to the following document:			
D1: DE 1 924 991 A1 (KARL SCHMIDT GMBH, 7107 NECKARSULM)			
19 November 1970 (1970-11-19)			
2. Novelty:			
Document D1 is considered to be the closest prior art. It discloses water-soluble salt cores for pressure casting, which are produced by compacting a mixture of water-soluble salts under pressure and subsequent sintering, with the mixture comprising, per 100 parts by weight of salt, from 4 to 5 parts by weight of borax, from 2 to 3 parts by weight of magnesium oxide and from 0.5 to 2 parts by weight of graphite or talc. The cores are produced at a pressure of 75 N/mm ² .			
The subject matter of independent claim 1 differs from the prior art in that magnesium oxide rather than magnesium is mixed with the salt and in that compaction is carried out under a pressure of from 300 to 900 n/mm ² .			
2.1)			
The subject matter of claim 1 is thus novel			

Form PCT/ISA/237 (Box No. V) (January 2004)

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. V

Reasoned statement under Rule 43bis.1(e)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

(PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of producing environmentally friendly cores which are suitable for pressure casting.

2.2.)

The solution to this problem proposed in claim 1 of the present application involves an inventive step

(PCT Article 33(3)) for the following reasons:

Due to the increase in the pressure, the cores have a higher strength and can therefore be used more readily in pressure casting.

The present prior art would not have suggested to a person skilled in the art to increase the pressing pressure in this way in order to achieve the desired result.

3.) Subordinate claim:

Claim 2 is dependent on claim 1 and thus likewise meets the PCT requirements for novelty and inventive step.

4.)

Claim 3 is a summary of the contents of claims 1 and 2 and describes the method of producing the salt core claimed under claim 1 and is therefore likewise to be considered to be novel and inventive.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/DE2005/000272

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

a.)

Contrary to PCT Rule 5.1(a)(ii), the description does not cite document D1 or indicate the relevant prior art disclosed therein.

Form PCT/ISA/237 (Box No. VII) (January 2004)

MAY 04 2007

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/DE2005/000272

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The present application does not meet the requirements of PCT Article 6 because the subject matter of claims 1 and 3 is not clear.

a.)

The form in which the applicant wants to introduce the magnesium into the mixture is not clear.

b.)

The feature in claim 1 "that the compaction is carried out under a pressure of from 300 to 900 N/mm²" relates to the method instead of prescribing clear restrictions for the water-soluble core itself. The requirements of PCT Article 6 are therefore not met.

Form PCT/ISA/237 (Box VIII) (January 2004)